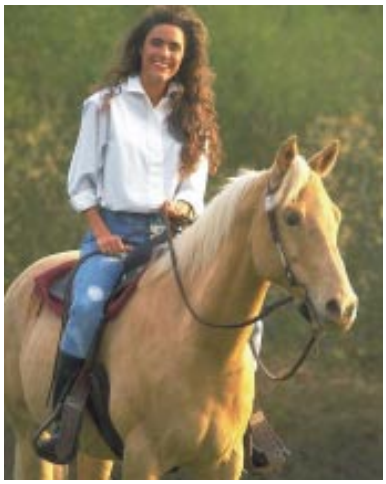
KENTUCKY ARTHRITIS REPORT







The Burden of Arthritis in the Commonwealth

Kentucky UNBRIDLED SPIRIT

Acknowledgements

This report was prepared by

The Kentucky Department for Public Health
Division of Adult and Child Health Improvement
Chronic Disease Prevention and Control Branch

KDPH contributing staff

Teresa A. Wood, PhD
Patricia A. Hinson, RN, BA
Patricia M. McLendon, MPH

Appreciation extended to
The Kentucky Arthritis Program's
Steering Committee

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Please direct requests for additional information to:

Kentucky Department for Public Health
Arthritis Program
275 East Main Street
Frankfort, KY 40601
Phone: (502) 564-7996
E-mail: Patricia. Hinson@ky.gov

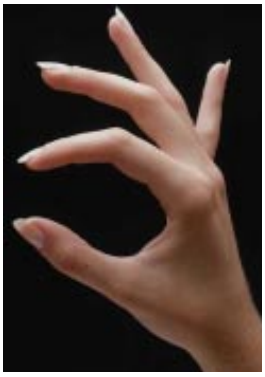


TABLE OF CONTENTS

CABINET FOR HEALTH AND FAMILY SERVICES
OFFICE FOR THE UNDERSECRETARY FOR HEALTH
DEPARTMENT FOR PUBLIC HEALTH
275 E. Main Street, HS1GW-A
Frankfort, KY 40621
(502) 564-3970
(502) 564-9377
www.chfs.ky.gov

Ernie Fletcher
Governor

James W. Holsinger, Jr., M.D.
Secretary

Dear Colleague:

The Kentucky Department for Public Health is pleased to share with you a copy of the *Kentucky Arthritis Report: The Burden of Arthritis in the Commonwealth.* Current data estimates that over one million Kentuckians aged 18 or older have arthritis and nearly 70 million Americans are afflicted by arthritis or other rheumatic conditions.

This report documents the significant arthritis burden among persons in the Commonwealth. Arthritis affects the quality of life of persons who experience this painful condition, as well as their family members and caregivers. To reduce the impact of arthritis, this information is offered to increase the awareness of this widespread condition as a public health issue and to inform decision makers who will provide directions for future program planning.

As a component of the Chronic Disease Prevention and Control Branch of the Kentucky Department for Public Health, the Kentucky Arthritis Program is the leader of cooperative efforts seeking to meet the challenges of arthritis management. Promoting healthy habits which include regular physical activity, good nutrition, and personal accountability over one's own health may significantly reduce the growing burden of arthritis.

Effective results are noted when individual Kentuckians become personally involved in understanding and using this vital information. With the encouragement and assistance of multiple dedicated individuals and organizations, it is possible for more communities, families and individuals to stay healthy, active, and productive through activities and actions associated with arthritis management. In short, the Kentucky Arthritis Program provides great hope for all Kentuckians living with arthritis.

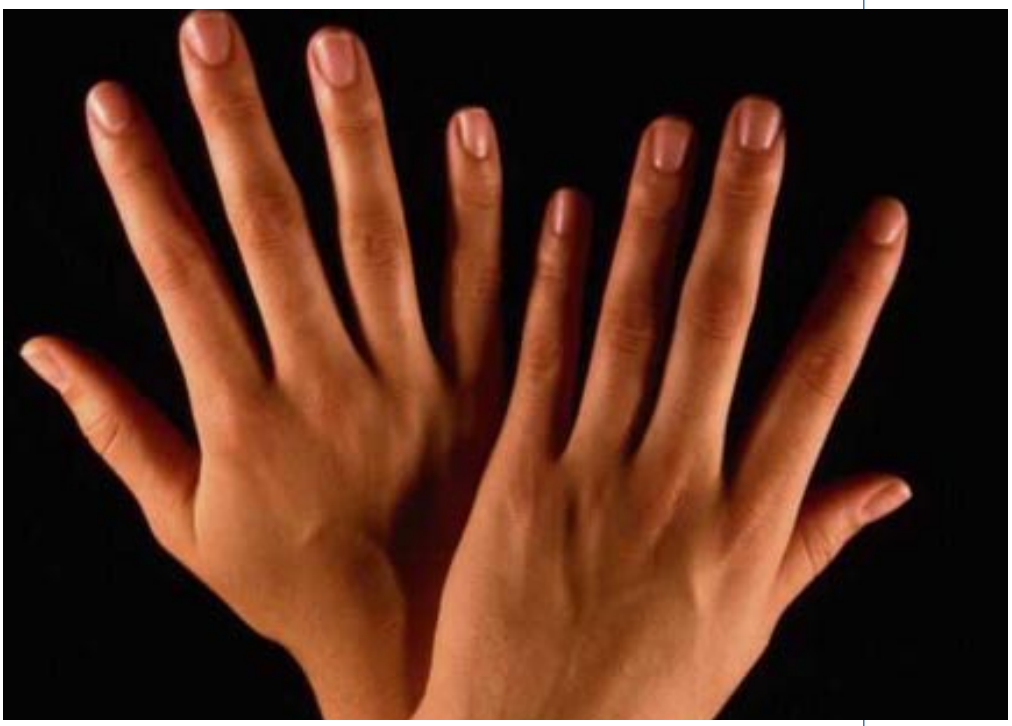
With appreciation to all those persons who assisted in preparing this document for distribution, my gratitude is also expressed to every reader who will become more informed about the serious efforts needed to reduce the burden of arthritis in our Commonwealth. Please join us as we partner together to positively affect the lives of our fellow Kentuckians affected by arthritis.

Sincerely,

William D. Hacker, MD, FAAP, CPE
Commissioner

EXECUTIVE SUMMARY

Arthritis and other rheumatic conditions affect nearly 70 million Americans. It is one of the most common chronic medical conditions in the United States and it is a leading cause of disability. Even more alarming is the fact that its prevalence is expected to increase as the U.S. population ages. More than 100 forms of arthritis and related conditions have been identified. These conditions cause swelling, pain, and limited movement in joints and surrounding tissues which can significantly impede the quality of the affected individual's daily life. This condition not only affects one's physical well-being, but arthritis and its related symptoms can also lead to social isolation, anger, and depression.



In addition to the physical and emotional effects of arthritis, the medical and societal costs are documented by numbers representing annual visits to health care providers, hospitalizations, and the overall estimated costs of care for persons with arthritis that are nothing less than enormous in scope. For these reasons and more, it has become increasingly evident that arthritis is a significant Public Health concern that must not go unnoticed.

Arthritis is a condition that finds its way into the lives of many of Kentucky's citizens. According to recent data provided by the Kentucky Behavior Risk Factor Surveillance System (BRFSS), over one million Kentuckians aged 18 years or older have doctor-diagnosed arthritis. It is important to emphasize that arthritis is not just an older person's disease. It can affect people of any age, race, or gender. Women, older persons, persons with a genetic predisposition, overweight or obese persons, and those in occupations that involve repetitive joint movements or heavy industry are at particular risk for the development of one of the many forms of arthritis.

The Kentucky Arthritis Report: The Burden of Arthritis in the Commonwealth was developed through the efforts of the Kentucky Department for Public Health and the Kentucky Arthritis Partnership. The data presented in this document pinpoints the significant arthritis burden that exists in Kentucky and will hopefully result in a heightened awareness of the immediate need for the development and implementation of a comprehensive statewide plan of action. A strong public health infrastructure committed to ongoing partnerships and collaborative efforts to reduce the burden and achieve a higher quality of life for Kentuckians with arthritis is the desired outcome of this endeavor.

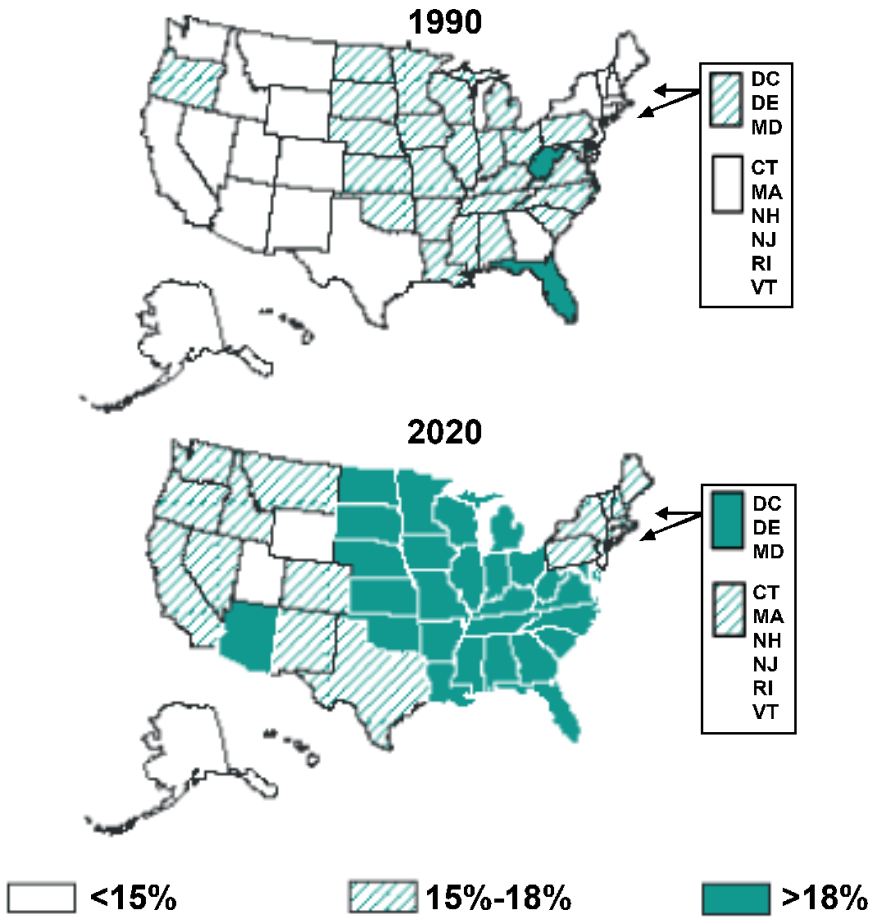
ARTHRITIS – A GROWING PUBLIC HEALTH CHALLENGE

Introduction

Arthritis encompasses more than 100 diseases and related conditions. Osteoarthritis, rheumatoid arthritis, and fibromyalgia are three of the most common forms of arthritis that have the greatest public health implications because of their increased incidence and potentially disabling effects. Arthritis affects all age, racial, and ethnic groups. Common symptoms of arthritis are joint pain, stiffness, and swelling of joints or other supporting structures such as tendons, ligaments, muscles and bones. Some rheumatic diseases affect other systems in the body such as the heart, bowels or kidneys. In addition, infectious diseases such as Lyme disease, syphilis and gonococcus infections can produce arthritic changes.

In 2001, 49 million American adults reported doctor-diagnosed arthritis and another 21 million reported chronic joint symptoms, making arthritis one of the nation's most common health problems. As the U.S. population ages, this number is likely to increase dramatically. For example, the number of people aged 65 or older who have arthritis or chronic joint symptoms is projected to nearly double from 2001 (21.4 million) to 2030 (41.4 million).

Figure 1. Estimated Arthritis Prevalence, 1990 and Projected to 2020

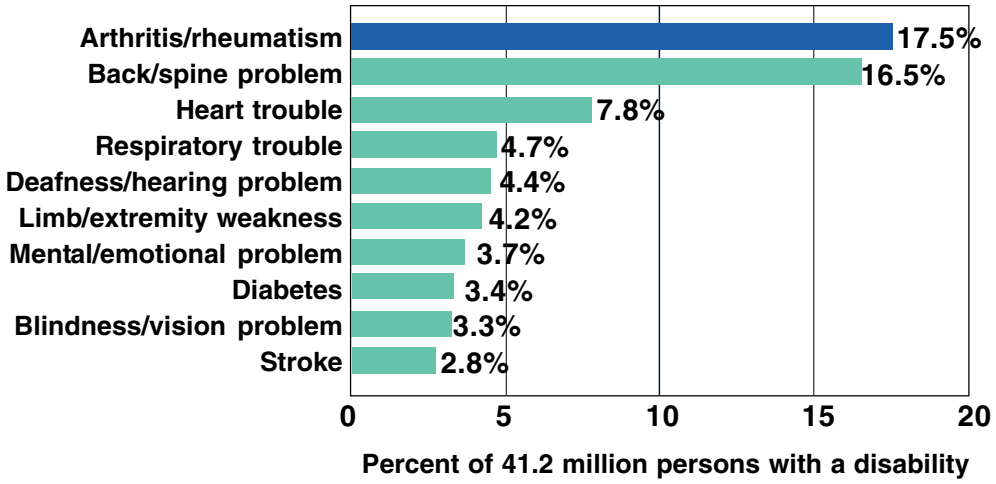


Source: Helmick CG, et al. Arthritis Care and Research 1995;8:203–11.

A Leading Cause of Disability and Decreased Quality of Life

Arthritis was the leading cause of disability among US adults in 1999 (the most recent year of available data). Arthritis is a threat to a person's physical, psychological, social, and economic well being. Physical symptoms of arthritis include pain, loss of joint motion, and fatigue. Because of these symptoms, arthritis limits everyday activities for 8 million Americans.

Figure 2. Leading Causes of Disability Among U.S. Adults, 1999



People with arthritis also may be significantly less active physically than the rest of the adult population. This level of inactivity puts them at higher risk for a variety of other conditions, including heart disease, diabetes, high blood pressure, colon cancer, obesity, depression, and anxiety. In fact, in its severe forms, arthritis can shorten life expectancy. Two million Americans with rheumatoid arthritis, for example, are at risk for premature death because of systemic complications from the disease and complications of treatment.

Psychological stress, depression, anger, and anxiety often accompany arthritis. People with arthritis may experience difficulty coping with pain and disability, which in turn can lead to feelings of helplessness and changes in self-esteem and self-image.

Social relationships are affected by arthritis. People with arthritis can experience decreased community involvement, and the economic implications may include financial burdens due to health care costs and work limitations.

Arthritis and the disability it causes create huge burdens for individuals, their families, and the nation. Each year, arthritis results in 750,000 hospitalizations and 36 million outpatient visits. In 1997, medical care for arthritis cost over $51 billion.

A Public Health Approach to Arthritis

In 1998, The National Arthritis Action Plan: A Public Health Strategy (NAAP) was developed by the Centers for Disease Control and Prevention (CDC), the Arthritis Foundation, the Association of State and Territorial Health Officials, and 90 other organizations to address the growing problem of arthritis. This landmark plan recommends a national coordinated effort to reduce pain and disability and improve the quality of life for people with arthritis. This plan forms the foundation of CDC's work in arthritis.

The NAAP recommends action in three major areas for individuals and groups interested in reducing the impact of arthritis:

- surveillance, epidemiology, and prevention research
- communication and education
- programs, policies, and systems.

The goals of the plan illustrate a distinct shift from the traditional clinical emphasis on treating individuals with arthritis to a public health approach emphasizing broad efforts that reach population groups. This approach complements the traditional medical model that emphasizes treating the individual with arthritis.

Recommendations from the plan include:

- Increase public awareness of arthritis as the leading cause of disability and an important public health problem.
- Prevent arthritis whenever possible.
- Promote early diagnosis and appropriate management for people with arthritis to ensure them the maximum number of years of healthy life.
- Minimize preventable pain and disability due to arthritis.
- Support people with arthritis in developing and accessing the resources they need to cope with their disease.
- Ensure that people with arthritis receive the family, peer, and community support they need.

Arthritis In Kentucky

The prevalence of arthritis in the United States and among Kentuckians is measured from a phone survey developed and coordinated by the CDC called the Behavioral Risk Factor Surveillance System (BRFSS). Conducted in all 50 states and the District of Columbia, the survey collects health information from adults aged 18 and older. In Kentucky, the BRFSS is conducted by the Kentucky Department for Public Health, Division of Epidemiology and Health Planning. In 2003, over 7,500 Kentuckians provided information to interviewers.

While there is some variation in the prevalence of arthritis by age, race, and sex, arthritis has a significant impact on all Kentuckians. Over one third (34.6%) of those interviewed indicated that a doctor or other health care professional had told them that they have some form of arthritis (Figure 3). Rates are higher for women, and for whites.

In addition to those who have been diagnosed with arthritis, another 15% reported symptoms of joint pain that lasted more than 3 months, indicating the possibility of an undiagnosed arthritic condition (Figure 4).

Figure 3. Kentucky Arthritis Prevalence by Gender and Race (2003 KY BRFSS)

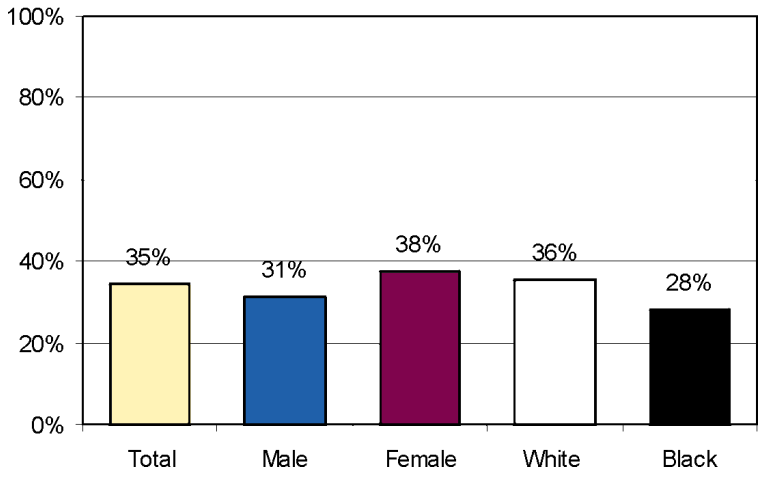


Figure 4. Chronic Joint Pain - Arthritis Not Diagnosed (2003 KY BRFSS)

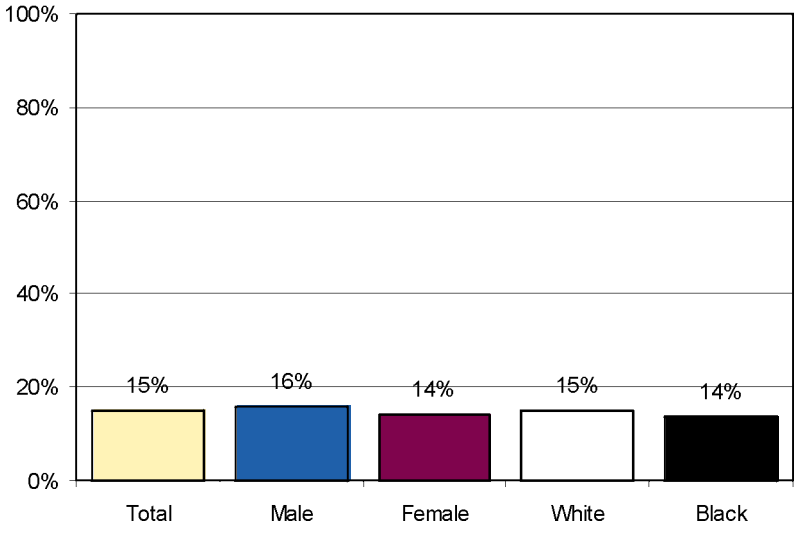


Figure 5. Prevealence of Arthritis Within Age Groups (2003 KY BRFSS)

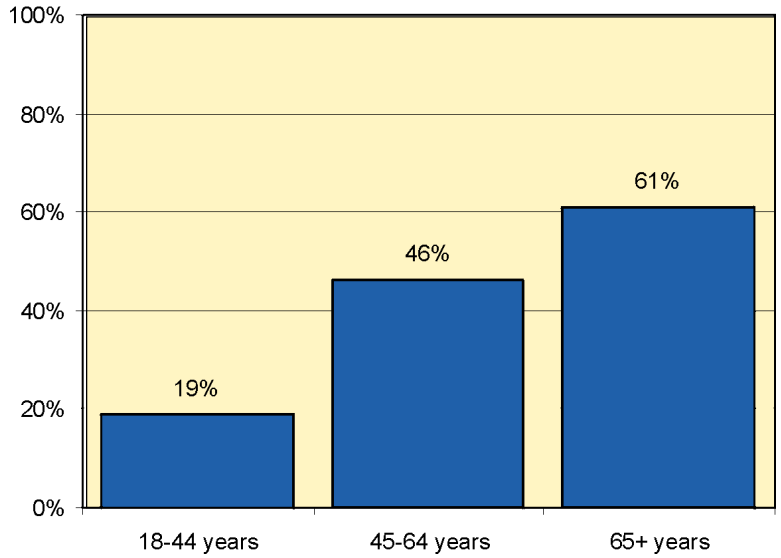
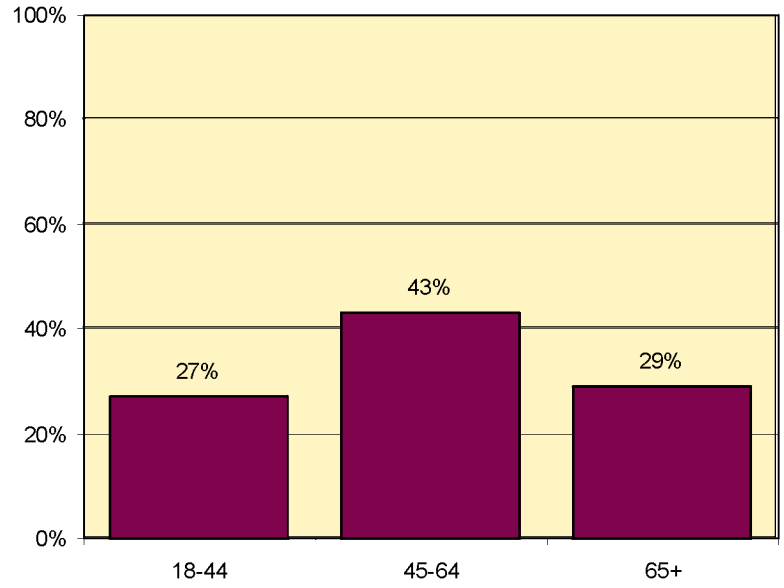


Figure 6. Age Distribution of Persons with Arthritis (2003 KY BRFSS)



One of the most common misconceptions about arthritis is that it is a disease of old age. While it is true that the prevalence of arthritis is highest among those aged 65 and older, this viewpoint gives us only part of the picture.

As shown in Figure 5, the highest rate of arthritis is seen in those aged 65 and older with 61 % of that age group reporting doctor diagnosed arthritis. This is a clear contrast from the 19% of those aged 18 to 44 who have been diagnosed with arthritis.

Figure 5 seems to confirm the image of arthritis being a disease of old age. However, when we look at the age distribution of those who have been diagnosed with arthritis, we see a much different picture.

Whereas Figure 5 looks at ALL people and shows us how many have arthritis within each age group, Figure 6 takes ONLY people with diagnosed arthritis and shows us their age distribution.

While figure 5 shows that 61% of people aged 65+ have arthritis, figure 6 shows us that only 29% of those with arthritis are aged 65 and older. The largest group with arthritis in Kentucky is those aged 45 to 64. In fact, we see from this chart that a full 70 % of those living with arthritis are under age 65 (Figure 6).

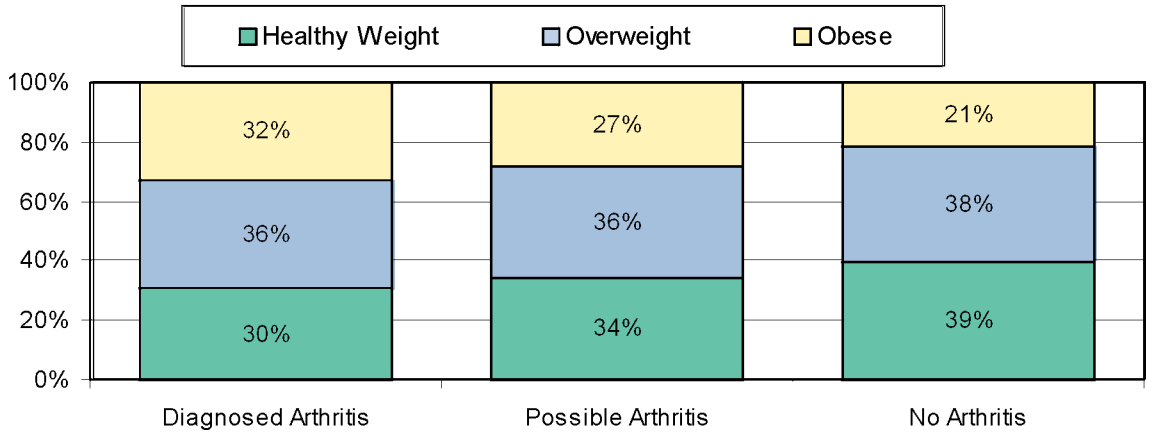
Risk Factors for Arthritis

While the causes of arthritis are the subject of ongoing investigation, research has identified certain risk factors that are known to be associated with the development of arthritis. Risk factors that cannot be changed are called fixed or non-modifiable risk factors. These include gender, age, race/ethnicity (discussed in the previous section), and genetic predisposition.

Modifiable risk factors are characteristics that can be changed or prevented from developing, potentially decreasing the prevalence or impact of arthritis. Like so many chronic diseases, being overweight or obese, and low levels of physical activity are modifiable risk factors for arthritis. Some sources indicate that losing as little as ten pounds can assist in reducing symptoms of arthritis.

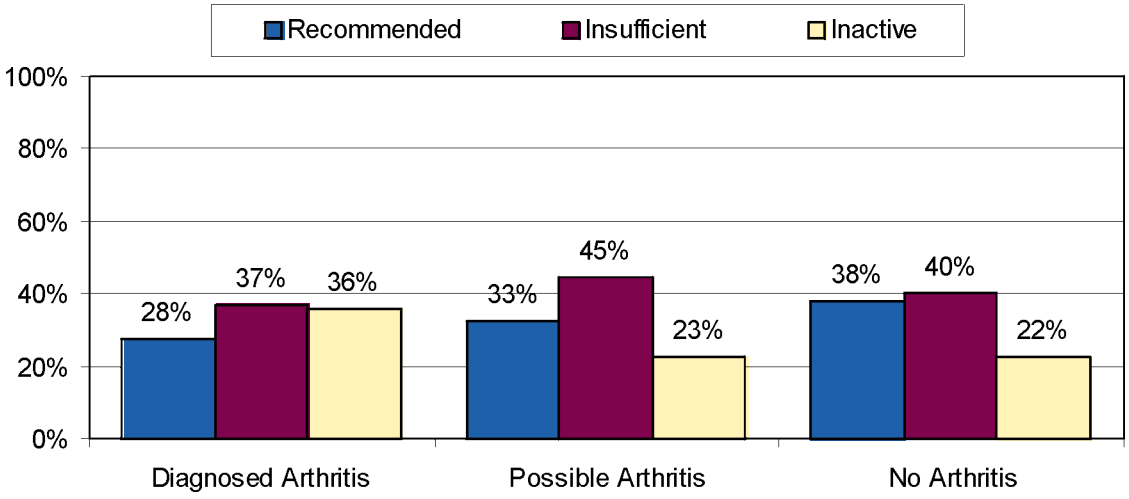
Figure 7 shows the weight status of Kentuckians with doctor diagnosed arthritis, with possible arthritis (chronic joint pain), and with no report of arthritis. Almost one third of those with diagnosed arthritis are obese, compared to 27% of those with chronic joint pain and only 21% of those with no reported arthritis.

Figure 7. Arthritis Status and Weight Category (2003 KY BRFSS)



Arthritis is also strongly linked to physical inactivity. Figure 8 shows the physical activity level for those with diagnosed arthritis, possible arthritis, and those with no arthritis. Physical activity is categorized as meeting the recommendations for moderate physical activity, participation in some physical activity but falling short of recommendations, or those who are completely inactive. Thirty-six percent of those with diagnosed arthritis are physically inactive compared to only 22% of those who do not have arthritis. Conversely, 38% of those without arthritis meet recommendations for moderate physical activity compared to 28% of those with arthritis.

Figure 8. Physical Activity Level and Arthritis Status (2003 KY BRFSS)



Health Related Quality of Life

Kentucky adults with arthritis are more than three times more likely to report being in fair or poor health than are those without arthritis. Almost 42% of adults with arthritis rate their health as fair or poor, compared to only 14% of those without arthritis. (Figure 9)

Figure 10 shows self-reported activity limitations among adults with arthritis. Half of all adults with arthritis report that they are limited in the kinds of activities they do because of their arthritis. Almost 60 % of black adults with arthritis report being limited in the activities they can accomplish.

Arthritis impacts not only the daily activity of Kentuckians, but it also impacts their ability to work at a paid job, the kind of paid work they do, and/or the amount of paid work done. Figure 11 shows the gender and racial breakdown of those with arthritis who report limitations on paid work. Here again, the impact is highest among blacks, with 64 % reporting work limitations. The fact that 70 % of those living with arthritis are between the ages of 18 and 64 demonstrates that arthritis has a significant impact on the Kentucky workforce.

Figure 9. Arthritis and Health Status 2003 KY BRFSS

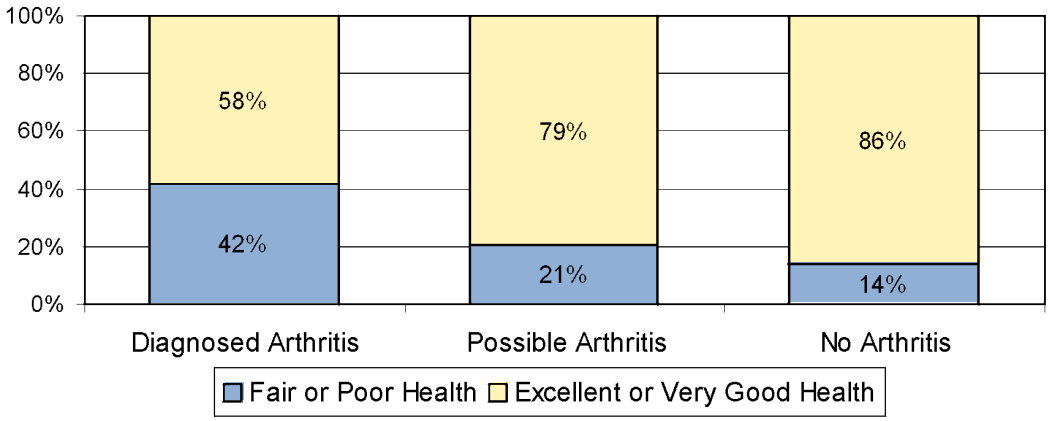


Figure 10. Activity Limitations Among Persons with Doctor-Diagnosed Arthritis (2003 KY BRFSS)

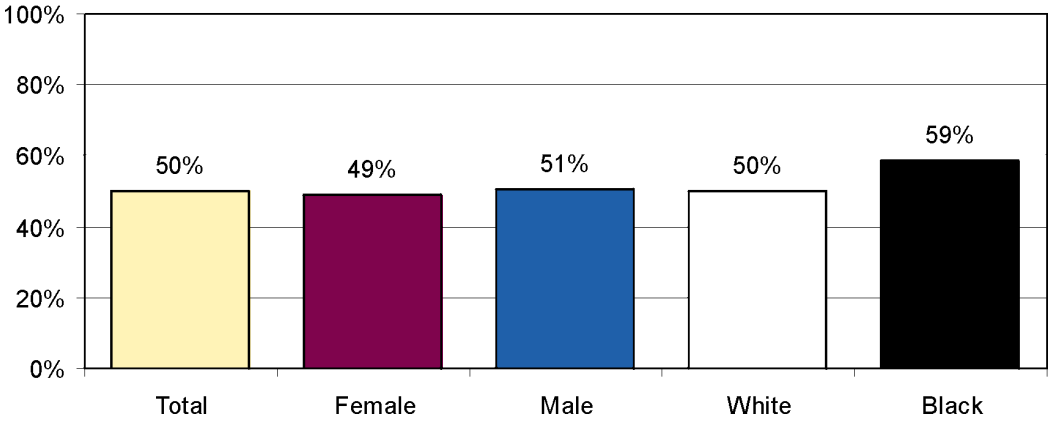
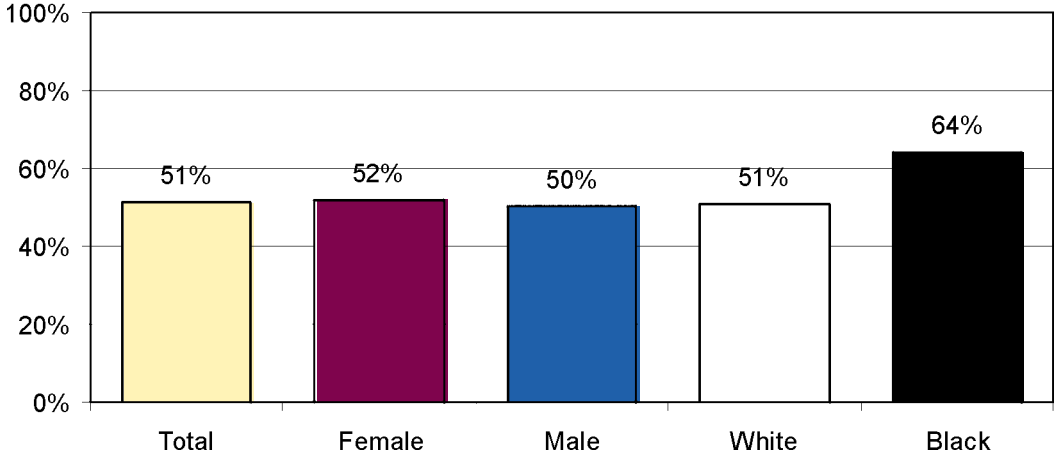
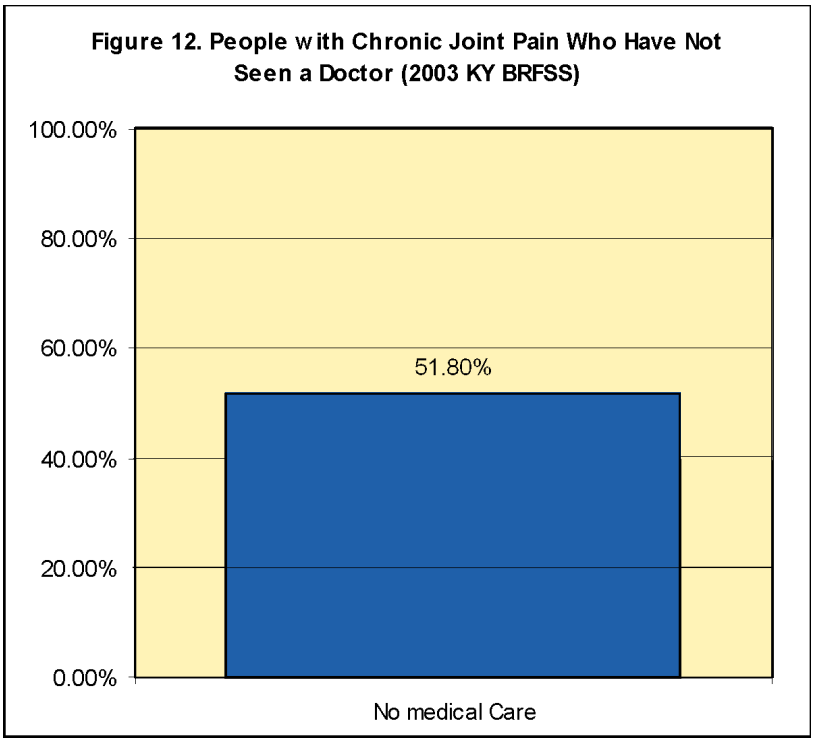


Figure 11. Persons with Arthritis Who Report Work Limitations (2003 KY BRFSS)



Barriers to Care

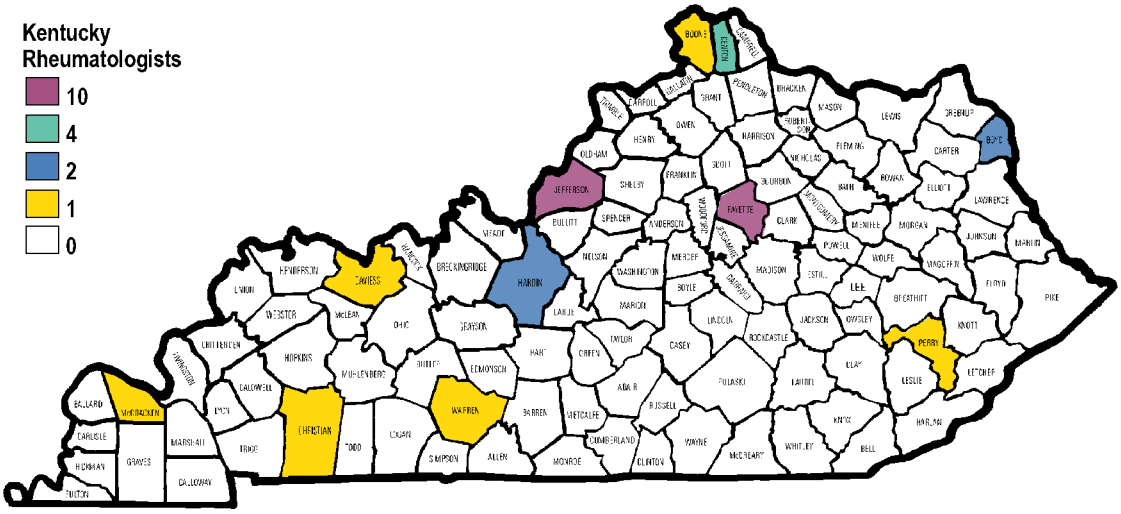
Because there are more than 100 types of arthritis, getting a specific, correct diagnosis as early as possible is of key importance to maintaining a good quality of life for those with arthritis. Early diagnosis, prescription of appropriate medications, exercise routines, and other management practices and treatment can mean less joint damage, less pain and fewer complications.



Despite the importance of early diagnosis, 51% of Kentuckians with symptoms have not visited a physician for diagnosis of their joint pain.

Unfortunately, access to care from a rheumatologist (a doctor specializing in arthritis) is limited for many Kentuckians, especially those living in the more rural or isolated areas of the state. Using data from physician licenses in Kentucky, the map below shows the location of physicians who practice rheumatology in Kentucky. The map clearly illustrates the lack of specialists outside the larger urban areas of Louisville and Lexington.

Kentucky Licensed Rheumatologists by County, May 2004



Hospitalization for Arthritis

Hospitalizations are an inevitable consequence for many persons affected by arthritic conditions. Extensive medical evaluations, treatment for complications associated with an arthritis diagnosis, and reconstructive surgical procedures are possible scenarios. During 2002 there were 10,962 hospitalizations due to arthritis. Fifteen percent of those hospitalizations were admitted after coming to the emergency room. The average length of stay was 4.2 days with average charges of $20,739. The cumulative costs total millions of dollars.

Table 1 shows hospitalization data categorized by age group, sex and payer source. The first column of the table shows the number of hospitalizations in each category. The largest group of hospitalizations occurs in the 65-84 year old category (47%). Women make up 62% of hospitalizations. Medicare covered 49 % of all hospitalizations.

Overall, the average length of stay was 4.2 days with an average charge of $20,739. Not surprisingly, the shortest stays (3.7 days) are seen in the 1-17 year old age group and the longest stays (4.5 days) among those over age 85. Looking at length-of-stay by payer source, it is interesting to see that the shortest stays occur among those with commercial insurance, yet the average charge in that group is the highest at $21,317. Uninsured and Medicaid hospitalizations were the longest at 4.8 and 4.7 days, but also incurred lower average charges.

Admission via an emergency room visit occurs in 15% of hospitalizations overall. It is notable that almost 41% of hospitalizations among those over age 85 came in via emergency rooms (ER), as did 58% of uninsured hospitalizations.

Table 1. Hospitalizations in 2002 for ICD-9-CM Arthritis Diagnosed Codes

	Number of Discharges	Admitted from Emergency Room* (Number and % within each category)	Average Length of Stay (days)	Average Charges
Age group				
<1	*	*	*	*
1-17	204 (1.86%)	62 (30.39%)	3.7	$11,188
18-44	1,176 (10.73%)	371 (31.55%)	4.0	$17,363
45-64	4,014 (36.62%)	446 (11.11%)	4.1	$22,209
65-84	5,125 (46.75%)	628 (12.25%)	4.4	$21,345
>85	433 (3.95%)	177 (40.88%)	4.5	$13,874
Sex				
Male	4,179 (38.12%)	709 (16.97%)	4.1	$20,642
Female	6,783 (61.88%)	977 (14.40%)	4.3	$20,799
Payer				
Medicare	5,336 (48.68%)	737 (13.81%)	4.4	$20,985
Medicaid	1,409 (12.85%)	348 (24.70%)	4.7	$18,779
Commercial	3,287 (29.99%)	415 (12.63%)	3.8	$21,317
Uninsured	101 (0.92%)	59 (58.42%)	4.8	$12,052
Other	829 (7.56%)	127 (15.32%)	3.8	$21,257
All discharges	**10,962**	**1,686 (15.38%)**	**4.2**	**$20,739**

Conclusion

While there is no cure for arthritis, research shows that early diagnosis and appropriate management can help reduce the consequences associated with most types of arthritis. No single method of care works best for everyone, but all people with arthritis can benefit from a holistic approach to medical care. This may include a combination of strategies including: education, counseling, occupational therapy, physical activity, weight reduction, diet, joint protection, prescription and/or over-the-counter medications, or surgery.

Arthritis is one of the most common chronic diseases in Kentucky. Two risk factors for arthritis, obesity and physical inactivity, are also endemic in Kentucky. The Kentucky Arthritis Program works closely with other chronic disease programs within the Department for Public Health to promote healthy lifestyles and dietary practices appropriate for persons with arthritis and other chronic diseases.

One of the most glaring needs in Kentucky is access to care. Prevention and client self management are two essential components of public health practice that offer specifically designed strategies to educate the public and provide opportunities for persons with chronic diseases the ability of optimize their quality of life. Yet many Kentuckians who are in need of specific diagnoses and ongoing arthritis medical management have limited access to arthritis specialists. Additional unmet needs in many areas of the state include a lack of arthritis appropriate exercise facilities and self-management programs.

Creative and ongoing partnerships with entities such as universities, rheumatology practices, The Arthritis Foundation, local health departments, and many others who have vested interests in arthritis work must be a reality. Together, we must strive to facilitate solutions for the obvious needs that Kentuckians with arthritis currently face. To assist persons with arthritis and to be effective in helping them maximize both the quality and longevity of life will be the goal and challenge for everyone associated with the Kentucky Arthritis Program.

Technical Notes

Prevalence data and risk factor data for this report comes from the 2003 Kentucky Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is an annual phone survey that assesses health behaviors and practices among non-institutionalized adults aged 18 and older. The data analysis was conducted in a standardized way by CDC staff to ensure comparability across states and between national and state data.

The following table describes how BRFSS respondents were categorized into different groups for the data analysis.

Respondents Categorized As:	Response To Question(s)
Doctor-Diagnosed Arthritis	Answered YES to: "Have you ever been told by a doctor or other health professional that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?"
Activity Limitation Attributable to Arthritis or Joint Symptoms	Those with Doctor Diagnosed Arthritis who also answered "YES" to the question: "Are you now limited in any way in any of your usual activities because of arthritis or joint symptoms?"
Work Affected by Arthritis or Joint Symptoms	Those with doctor-diagnosed arthritis who also answered "YES" to the question: "In this next question we are referring to work for pay. Do arthritis or joint symptoms now affect whether you work, the type of work you do, or the amount of work you do?"
Possible Arthritis	Those that answered "NO" to the question: "Have you ever been told by a doctor or other health professional that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?" AND answered "YES" to the following two questions: "The next questions refer to your joints. Please do not include the back or neck. During the past 30 days, have you had any symptoms of pain, aching, stiffness, in or around a joint? **and** Did your joint symptoms first begin more than 3 months ago?"
Activity Limitation From Joint Symptoms	Those with possible arthritis who also answered "YES" to the question: "Are you now limited in any way in any of your usual activities because of arthritis or joint symptoms?"
Not Diagnosed With Arthritis	Those that answered "NO" to the question: "Have you ever been told by a doctor or other health professional that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?" AND answered "NO" to the question: "The next questions refer to your joints. Please do not include the back or neck. During the past 30 days, have you had any symptoms of pain, aching, stiffness, in or around a joint?
Body-Mass Index (BMI)	Was calculated from self -reported height and weight, then categorized according to the National Institutes of Health Scheme as Underweight (BMI<18.5), Normal weight (18.5<=BMI<25.0), Overweight (25.0<=BMI<30.0), and Obese (BMI>=30.0).
Health Status	Was defined using responses to the question: Would you say that in general your health is excellent, very good, good, fair, or poor?

Data for hospital discharges was pulled from the Healthcare Cost and Utilization Project (HCUP) website (HCUPnet http://www.ahrq.gov/hcupnet/) using the ICD9-CM diagnostic codes defined for arthritis and other rheumatic conditions set by the National Arthritis Data Workgroup (NADW) in 1995. These codes represent all potential diagnoses for arthritis and other rheumatic conditions.

Cabinet for Health and Family Services
Kentucky Department for Public Health
Chronic Disease Prevention & Control Branch
Arthritis Program
275 East Main Street, HS2WE
Frankfort, Kentucky 40621
Telephone: (502) 564-7996
Fax: (502) 564-4667